

Applicant:

Lambert DANNER et al

Title:

SPECTRAL ELLIPSOMETER HAVING A REFRACTIVE

ILLUMINATING OPTICAL SYSTEM

Appl. No.:

09/893,709

Filing Date:

06/29/2001

Examiner:

S. Sugarman

Art Unit:

2873

UNDER 37 CFR §1.56

Mail Stop PATENT APPLICATION Commissioner for Patents PO Box 1450 Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing of a first Office Action after the filing of a request for continued examination under §1.114.

RELEVANCE OF EACH DOCUMENT

These documents have been received from a third party (J.A. Woollam). This party has made notes on the documents which may not be part of the prior art and which the applicant does not necessarily agree with.

The applicant does not necessarily agree with the characterization of the scope and content of the prior art made in the enclosed documents.

Document A8 discloses a spectral oval polarimeter provided with a refractive lighting optical system.

Document A12 discloses an acousto-optic tunable double-beam spectrometer.

Document A14 discloses a three-dimensional shape measuring device.

Documents A7 and A13 (which discloses a spectral ellipsometer) claim priority based on the same first-filed application.

English translations of the foreign-language documents are not readily available. However, the absence of such translations does not relieve the PTO from its duty to consider the submitted foreign language documents (37 CFR §1.98 and MPEP §609). English language abstracts are provided for documents A8, A12, A13 and A14. An English language translation is also provided for document A14.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Glenn Law

Date: August 6, 2003

FOLEY & LARDNER

Customer Number: 22428

22428

PATENT TRADEMARK OFFICE

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Sheet

Substitute	for form 1449	В/РТО	314	Complete if Known	
INFORMA	TION DISCL	OSURE	Application Number	09/893,709	
STATEME	ENT BY APPL	LICANT	Filing Dat	06/29/2001	
Date Subr	nitted: August	6 2003	First Nam d Inv ntor	Lambert DANNER	
Date Oubii	iilleu. August	0, 2003	Group Art Unit	2873	
(use as man	y sheets as n	ecessary)	Examiner Name	S. Sugarman	
1	of	3	Attorney Docket Number	016790-0430	

	U.S. PATENT DOCUMENTS						
_	Cite No.1	U.S. Patent De	ocument	Name of Patentee or Applicant of Cited Document	Date of Publication of	Pages, Columns, Lines, Where Relevant	
Examiner Initials*		Number	Kind Code ² (if known)		Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear	
	A1	5,978,087		PATTERSON ET AL.	11/02/1999		
	A2	5,963,327		HE ET AL.	10/05/1999		
	A3	5,877,859		ASPNES ET AL.	03/02/1999		
	A4	5,349,471		MORRIS ET AL.	09/20/1994		
	A5	5,166,752		SPANIER ET AL.	11/24/1992		
	A6	4,671,657		CALVANI ET AL.	06/09/1987		
	A7	2002/0024669	A1	DANNER ET AL.	02/28/2002		

				F	DREIGN PATENT DOCUMEN	TS		
Examiner Initials*	Cite No. ¹	F Office		nt Code ⁵ nown)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	A8	JP	2002-098591	Α	LEICA MICROSYSTEMS WETZLER GMBH	04/05/2002		Abstract
	A9	wo	99/02950	A1	OPTICAL INSIGHTS, LLC	01/21/1999		
	A10	wo	96/18205	A1	MOLECULAR DYNAMICS, INC.	06/13/1996		
	A11	wo	92/12404	A1	RUDOLPH RESEARCH CORPORATION	07/23/1992		
	A12	WO	91/14157	A2	BRAN + LUEBBE GMBH	09/19/1991	*	Abstract
	A13	EP	1 172 642	A2	LEICA MICROSYSTEMS WETZLER GMBH	01/06/2002		Abstract
	A14	JP	7-229720	Α	NIHON DENKI KK	08/29/1995		Transl.

	NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ₆					
	A15	Affidavit from John Woollam, President of J.A. Woollam Co., Oct. 1, 2002.						
		Affidavit from Hiroki Hashimoto of Fujitsu Corporation (English and Japanese language) dated 9/2/2002, along with Fujitsu Purchase Order sheet and Acceptance Report by Fujitsu of Woollam Company Achromatic focusing M-44 Ellipsometer dated 07/08/1999.						
	A17	Affidavit from Michio Suzuki of J.A. Woollam Co., Japan (English and Japanese language) dated 9/2/2002, along with Purchase Order Sheet by Japan company from J.A. Woollam Co., Lincoln, for an achromatic focusing M-44 for Fujitsu dated 7/5/1999.						

Examiner Date	
Signature Considere	1

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English tanguage Translation is attached.

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AUG O G ZOOG Approved for use through 10/31/2002. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to spond to a collection of information unless it contains a valid OMB control

number. LENT & Substitute for form 1449B/PTO Complete if Known INFORMATION DISCLOSURE **Application Number** 09/893,709 STATEMENT BY APPLICANT 06/29/2001 **Filing Date** Lambert DANNER **First Named Inventor** Date Submitted: August 6, 2003 Group Art Unit 2873 (use as many sheets as necessary) **Examiner Name** S. Sugarman Sheet 2 of 016790-0430 **Attorney Docket Number**

		NON PATENT LITERATURE DOCUMENTS	-
Examiner nitials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	7
	A18	Affidavit from Gen Wang of Samsung Information Systems America, Inc., dated 08/28/2002, along with the Purchase Order and Original Quotation for achromatic focusing M-44 from J.A. Woollam Co., dated 01/07/1997.	
	A19	Affidavit from Erik Bylin, Materials Director, NANOmetrics Corporation, 09/20/2002.	
	A20	Multiwavelength Ellipsometers, Vintage J.A. Woollam Co., M-44/M-88, December 1996.	
	A21	Letter from Roger Bruhn, R. Bruhn Photography + Design, with attachment.	
	A22	Multilayer Optical Spectrometer Scanner, SOPRA Brochure, March 1989, pages 2-6.	
	A23	Yufeng Li, "Flying Height Measurement on Al₂O₃ Film of a Magnetic Slider", Tribology, Vol. 119, October 1997, pages 681-686.	
	A24	J. A. Zapien et al., "Real-time Spectroscopic Ellipsometry from 1.5 to 6.5 eV", Thin Solid Film, Vol. 364, Nos. 1,2, March 27, 2000, pages 16-21.	
	A24	E. Hecht, "More on Geometrical Optics", OPTICS, Chapter 6, 1977, pages 232-239.	
	A25	M. E. El-Ghazzawi et al., "Spectroellipsometry Characterization of Directly Bonded Silicon-on-Insulator Structures", Thin Solid Films, Vol. 223, 1993, pages 218-222.	
	A26	Edmund Industrial Optics, 1999 Optics and Optical Instruments Catalog pages, 3 pages	
	A27	Purchase Orders from Edmund Scientific Company to J.A. Woollam Co. dated October 14, 1999, April 13, 1998 and March 28, 1996.	-

,	Date Considered	
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Standard ST.3). *For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. English language Translation is attached.

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ndinber.	Substitute for	r form 1449B	/PTO		Complete if Known	
	INFORMATIO	ON DISCLO	SURE	Application Number	09/893,709	
	STATEMENT	BY APPLI	CANT	Filing Date	06/29/2001	
	Date Submitte	ad: August 6	3003	First Named Inventor	Lambert DANNER	
	Date Submitte	a. August (D, 2005	Group Art Unit	2873	
0	(use as many s	heets as ne	cessary)	Examiner Name	S. Sugarman	
Sheet	3	of	3	Attorney Docket Number	016790-0430	

		NON PATENT LITERATURE DOCUMENTS	
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	A28	Alleged Evidence J.A. Woollam Co., sold Edmund Scientific Achromatic Lens to Fujitsu, Samsung, and Nanometrics including Bill of Materials of M44-FCS-OPTICS shipped 10/13/1999 showing EDMUND Part 32,311 Achromatic Lens 34.47 was included, 12 pages.	
	A29	Alleged Representative/Example Purchase Orders and Packing Lists for sales of J.A. Woollam focused (achromatic) spectroscopic M-44 ellipsometers to NANOmetrics Corporation. Dates are prior to July 11, 2000, 6 pages.	
	A30	Order bills for M-44 Ellipsometer with achromatic focusing lenses for NANOmetrics Corporation. Order numbers correspond with Packing List and Purchase Order Receiver numbers listed in Erik Bylin's Affidavit, 20 pages.	
	A31	Purchase Orders from Melles Griot Corp. to J.A. Woollam Co., for Achromatic Lenses, 1997, 8 pages.	
	A32	Purchase Order No. P9508-F29, J.A. Woollam Japan Corporation, December 1, 1995, 2 pages.	
	_A33	J.A. Woollam Co., Inc., FS-110 Vertical Ellipsometer focused Beam System Upgrade Installation Instructions, 2-21-1994, pages 2-3.	
	A34	Advertisement for VASE, R&D Magazine, February 1999, page 38.	

Examiner	Date
Signature	Considered

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